

SEP 26 2007

Amendment and Response Under 37 C.F.R. §1.116 - Expedited Examining Procedure

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Serial No.: 10/643,771

Confirmation No.: 4116

Filed: 19 August 2003

For: DENTAL CROWN FORMS AND METHODS

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**Remarks**

The Final Office Action of 26 June 2007 has been received and reviewed. Claims 1, 3, and 6 have been amended, and no claims have been cancelled or added. Therefore, claims 1-67 are pending (of which 19-67 are withdrawn). Reconsideration and withdrawal of the rejections are respectfully requested as discussed below.

**Claim Amendments**

Independent claims 1, 9, and 13 have amended to include the recitation "anatomically" to further describe "tooth-shaped volume" and, in claim 1, the recitation "for forming a dental crown" to further describe "hardenable dental material." Support for these claim amendments may be found in the application as originally filed. *See, e.g.*, page 5, lines 1-9 & page 3, line 22

Dependent claim 3 and independent claim 9 have been amended to recite that "the handle volume is not filled with the hardenable dental material." Support for these amendments can be found in the application as filed. *See, e.g.*, page 6, line 30 to page 7, line 31; page 9, lines 3-26; and Figure 2.

Entry and consideration of these amendments are, respectfully, requested.

**The 35 U.S.C. § 102 Rejection**

Claims 1-6, 9, 10, 13, 14, 17, and 18 were rejected under 35 U.S.C. §102(b) as being anticipated by Lytton (U.S. Patent No. 3,390,458). Applicants respectfully traverse this rejection.

For a claim to be anticipated under 35 U.S.C. § 102(b), each and every element of the claim must be found in a single prior art reference. *See* M.P.E.P. § 2131.

**Claims 1-6**

Applicants respectfully submit that Lytton fails to teach each and every element of claims 1-6, as a result, the anticipation rejection of these claims must be withdrawn.

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Independent claim 1, as amended, recites a dental crown form including, among other things, a body defining an anatomically tooth-shaped volume, hardenable dental material for forming a dental crown located within the anatomically tooth-shaped volume, and a handle attached to the body at a location removed from the base.

The anticipation rejection of independent claim 1 must be withdrawn because Lytton does not teach each and every element recited in independent claim 1.

For example, Lytton does not teach hardenable dental material for forming a dental crown located within an anatomically tooth-shaped volume as recited in claim 1. Instead, Lytton teaches "a soft semi-plastic material 4 such, for example, as wax, or putty, or clay, or the like" that this "soft plastic that is used to retract the gum may or may not set but may remain in a flexible form." *Lytton*, column 3, lines 39-41 & column 2, lines 56-58. The tube 1 and plastic 4 are held in position over the tooth for approximately five to fifteen minutes to force the gum away from the surface of the tooth under the gum. *See Lytton*, column 3, lines 49-52. Then, the tube 1 and the plastic 4 are removed while the gum remains in its retracted position so that an impression can be made of the tooth in the usual way. *See Lytton*, column 3, lines 52-55. Applicants submit, therefore, that the soft semi-plastic material disclosed in Lytton is clearly not hardenable dental material for forming a dental crown as claimed.

As such, Lytton fails to teach hardenable dental material for forming a dental crown as required for anticipation of independent claim 1.

Further, Lytton does not teach a body defining an anatomically tooth-shaped volume as recited in claim 1. Instead, Lytton teaches "a tube of deformable material in a size to fit over and go slightly under the gum line of the tooth." *Lytton*, column 2, lines 4-6. The tube 1 of Lytton clearly does not define an anatomically tooth-shaped volume as claimed.

It is asserted in the Final Office Action that the "[t]ooth-shaped volume does not exclude simple, geometric shapes as described by Applicant." *Final Office Action*, 26 June 2007, page 3. Applicants respectfully disagree. However, in an effort to move the prosecution of this application forward, Applicants have amended claim 1 to include the recitation "anatomically" to

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further describe "tooth-shaped volume." Applicants submit that the amended claim language, (i.e., "anatomically tooth-shaped volume") excludes simple geometric shapes that are not anatomically tooth-shaped, such as the shape of the tubes described in Lytton.

Further, Lytton does not teach a handle attached to the body at a location removed from the base as recited in amended claim 1. The Final Office Action appears to equate the tapered top of the flexible tube 15 shown in FIGS. 11 & 12 of Lytton to the claimed handle. Nothing is identified within the disclosure of Lytton that supports the assertion that the tapered top of flexible tube 15 is a handle, or is to be used as a handle. Lytton briefly describes the tapered top of the flexible tube 15 reciting that "the advantage of this form . . . is that it is sometime more convenient to apply sideways or pinching type of pressure than to press straight down." Lytton, column 4, lines 6-9. Therefore, Applicants respectfully submit that the tapered top as described in Lytton is not a handle as claimed.

As such, Lytton fails to teach a handle attached to the body at a location removed from the base as recited in amended claim 1 as required for anticipation.

In addition, dependent claim 3 has been amended to recite that the claimed handle volume of the hollow handle "is not filled with the hardenable dental material." Even if the structure of Lytton can be interpreted to be a hollow handle as recited in original claim 3, any such handle would be filled by the semi-plastic material 16 as seen in Figures 2-6 and 8-9 of Lytton. As a result, Lytton cannot anticipate claim 3.

For at least the above reasons, Applicants respectfully submit that claim 1 is not anticipated by Lytton. Furthermore, because claims 2-6 are directly or ultimately dependent on claim 1, claims 2-6 are also novel in view of Lytton. Reconsideration and withdrawal of this rejection are, therefore, respectfully requested.

In addition, however, Applicants submit that claim

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Claims 9 and 10

Applicants respectfully submit that Lytton fails to teach each and every element of independent claim 9 and, as a result, the anticipation rejection of claims 9 & 10 must be withdrawn.

Independent claim 9 recites, among other things, a dental crown form including a body that defines "an anatomically tooth-shaped volume." In addition, claim 9 also recites a hollow handle attached to the body, where the hollow handle includes a handle that "is not filled with the hardenable dental material."

As discussed above in connection with the anticipation rejection of claims 1-6, Lytton does not teach either of these features.

For at least the above reasons, Applicants respectfully submit that claim 9 is not anticipated by Lytton. Furthermore, because claim 10 is dependent on claim 9, claim 10 is also novel in view of Lytton. Reconsideration and withdrawal of this rejection are, therefore, respectfully requested.

Claims 13, 14, 17, and 18

Applicants respectfully submit that Lytton fails to teach each and every element of independent claim 13 and, as a result, the anticipation rejection of claims 13, 14, 17, and 18 must be withdrawn.

Independent claim 13 recites, among other things, a dental crown form including a body that defines "an anatomically tooth-shaped volume."

As discussed above in connection with the anticipation rejection of claims 1-6, Lytton does not teach such a feature.

For at least the above reasons, Applicants respectfully submit that claim 13 is not anticipated by Lytton. Furthermore, because claims 14, 17, and 18 are directly or ultimately dependent on claim 13, claims 14, 17, and 18 are also novel in view of Lytton. Reconsideration and withdrawal of this rejection are, therefore, respectfully requested.

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**The 35 U.S.C. § 103 Rejections**

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art references (or references when combined) must teach or suggest all the claim limitations. M.P.E.P. § 2143.

Claims 7, 11, and 15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Lytton in view of Willison et al. (U.S. Patent Application Publication No. 2004/0005277).

Claims 8, 12, and 16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Lytton in view of Subelka et al. (U.S. Patent No. 6,696,507).

Applicants respectfully traverse these rejections.

As discussed above with respect to the anticipation rejections, one or more features recited in each of the dependent claims 1, 9, and 13 is not found in Lytton. Therefore, Lytton does not teach all the claim limitations of dependent claims 7, 8, 11, 12, 15, and 16, which directly or ultimately depend on claims 1, 9, or 13. Further, no portion of Lytton is identified as suggesting the missing, nor is anything identified within Willison et al. or Subelka et al. that, taken together with Lytton, remedies the deficiencies of Lytton. As a result, none of the proposed combinations of references do not establish *prima facie* cases of obviousness.

Further, Applicants further submit that the Final Office Action has failed to identify a legally sufficient motivation or suggestion to combine the teachings of Lytton with those of Willison or Subelka et al. Moreover, even if such a motivation or suggestion were presented, Applicants submit that it is beyond any predictable use of the combined respective elements of the documents according to their established functions.

Lytton discloses "[a] method and apparatus . . . for assisting in obtaining an accurate impression of the root of the tooth below the gum line." *Lytton*, column 1, lines 9-14. Willison

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et al. discloses "an over-the-counter device for delivering an oral care agent, for example, a tooth whitening agent." *Willison et al.*, paragraph [0019]. Although these disclosures are related to the dental arts, each discloses a different area of the dental arts: assisting in obtaining tooth impressions and a device for delivering an oral care agent. Applicants are unclear as to why one having ordinary skill in the art would be motivated to combine a gum retraction device with a device that delivers an oral care agent to provide a dental crown form as recited in the rejected claims.

For example, Lytton discloses "[a] method and apparatus . . . for assisting in obtaining an accurate impression of the root of the tooth below the gum line." *Lytton*, column 1, lines 9-14. In contrast, Subelka et al. discloses a method of using and packaging a dental composite material. *Subelka et al.*, column 1, lines 16-18. Although these disclosures are related to the dental arts, each discloses a different area of the dental arts: assisting in obtaining tooth impressions and a method of using and packaging a dental composite material. The Final Office Action recites that "[i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the dental form of Lytton to be packaged as in Subelka et al. in order to protect the contents from premature exposure to light in view of Subelka et al."

Applicants are unclear as to why the dental forms of Lytton would need to be protected from exposure to light. Nothing is identified within the disclosure of Lytton that would lead a person having ordinary skill in the art to that the dental forms of Lytton need to be protected from "light." If this rejection is maintained, Applicants respectfully request clarification as to why a person having ordinary skill in the art would be motivated to protect the gum retraction device of Lytton from "light."

For at least the reasons presented above, Applicants respectfully submit that claims 7, 8, 11, 12, 15, and 16 (which directly or ultimately depend on one of claims 1, 7, or 13), are patentable over the asserted combinations of references.

Reconsideration and withdrawal of these obviousness rejections are, therefore, respectfully requested.

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**Summary**

It is respectfully submitted that the pending claims are in condition for allowance and notification to that effect is respectfully requested. The Examiner is invited to contact Applicants' Representatives, at the below-listed telephone number, if it is believed that prosecution of this application may be assisted thereby.

Respectfully submitted

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26 SEPT. 2007  
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**CERTIFICATE UNDER 37 CFR §1.8:**

The undersigned hereby certifies that the Transmittal Letter and the paper(s), as described hereinabove, are being transmitted by facsimile in accordance with 37 CFR §1.6(d) to the Patent and Trademark Office, addressed to Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 26th day of September, 2007, at 2:29 PM (Central Time).

By: R. GebhardtName: R. Gebhardt